

Claims

1. A gene which is DNA coding for a protein designated  
as SEQ ID NO. 2 or DNA having a 90% or higher homology with  
the former DNA and coding for a protein with  $\alpha$ -1,6-  
5 mannosyltransferase activity.

2. The gene according to claim 1, wherein the gene is  
DNA designated as SEQ ID NO. 1.

3. A protein which is coded by the gene of chain 1  
and has  $\alpha$ -1,6-mannosyltransferase activity.

10 4. A recombinant vector (designated under accession  
number KCTC 10583BP) comprising a DNA gene designated as  
SEQ ID NO. 1.

5. A *Hansenula polymorpha* *Hpoch2* $\Delta$  mutant strain  
deposited under accession number KCTC 10584BP.

15 6. The *Hansenula polymorpha* *Hpoch2* $\Delta$  mutant strain  
according to claim 5, comprising an expression vector for a  
sugar chain-modifying enzyme.

7. The *Hansenula polymorpha* *Hpoch2* $\Delta$  mutant strain  
according to claim 6, wherein the sugar chain-modifying  
20 enzyme is selected from the group consisting of  $\alpha$ -1,2-  
mannosidase, mannosidase IA, mannosidase IB, mannosidase IC,

mannosidase II, N-acetyl glucosaminyltransferase I, N-acetyl glucosaminyltransferase II, galactosyltransferase, sialyltransferase and fucosyltransferase.

8. A process for producing a recombinant glycoprotein with reduced glycosylation using the *Hansenula polymorpha* *Hpoch2Δ* mutant strain according to claim 5.

9. The process according to claim 8, wherein the *Hansenula polymorpha* *Hpoch2Δ* mutant strain comprises an expression vector for a sugar chain-modifying enzyme.

10. The process according to claim 8 or 9, wherein the recombinant glycoprotein is selected from the group consisting of cytokines, clotting factors, endothelial growth factor, growth hormone releasing factor, growth factors, angiostatin, tissue plasminogen activator, plasminogen activator inhibitor, urokinase, immunoglobulins, *Bacillus amyloliquefaciens*  $\alpha$ -amylase, *Saccharomyces cerevisiae* aspartic protease, *Saccharomyces cerevisiae* invertase, *Typanosoma cruzi* trans-sialidase, HIV envelope protein, haemagglutinin, enterokinase, herpes virus type-1 glycoprotein D and immuglobulin.

11. A glycoprotein produced by the process of claim 8 or 9.